



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,796	07/02/2001	Matthew M. Seabaugh	3995591-132357	1250

7590

07/31/2003

PORTER WRIGHT MORRIS & ARTHUR LLP  
Attorneys & Counselors at Law  
41 South High Street  
Columbus, OH 43215-6194

EXAMINER

BELL, BRUCE F

ART UNIT

PAPER NUMBER

1746

DATE MAILED: 07/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/897,796

Applicant(s)

SEABAUGH ET AL.

Examiner

Bruce F. Bell

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 1-20 and 22-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21 and 38-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.                      6) ☐ Other: .

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 21 is rejected under 35 U.S.C. 102(b) as being anticipated by Ying et al (6013591).

Ying et al disclose a nanocrystalline apatite composition having a average crystal size of less than 150 nm and having a surface area of at least 40 m<sup>2</sup>/g and be of high density. See abstract. The method of forming ceramic materials including apatitic materials are taught. See col. 8, lines 51-67; col. 9, lines 10. The formation of nanocrystalline composites including one or more apatites with auxiliary additives including ceramics, metals and alloys are taught. The preferred ceramics are alumina, zirconia, titania, silicon carbide, silicon nitride, and other structural ceramics. The structural additive is also nanocrystalline. See col. 9, lines 11-18. The particulate ceramic material, preferably apatite, has a high surface area of at least 40 m<sup>2</sup>/g and most preferably 150 m<sup>2</sup>/g. See col. 11, lines 6-10.

Ying et al anticipates the applicant's instant invention as set forth because the crystalline nanoscale ceramic electrolyte material has been found in the prior art.

Art Unit: 1746

Applicants have claims a product by process, however, the product has been found in the Ying et al patent. In a product by process claim, it must be shown that the process materially alters the product via comparison results to overcome the rejection of a final product. Since the final product has been found and applicants have failed to show that the process materially alters the product the rejection as set forth is proper.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 21, 38-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Yadav et al (5905000).

Yadav et al disclose an ion conducting solid electrolyte constructed of a nanoscale precursor material for use in fuel cells and batteries. See abstract. The precursor material is shown to be a 9 mole percent yttria-stabilized-zirconia nanoscale material (YSZ). See col. 6, lines 46-48. The YSZ material is pressed into disc form and sintered to high densities for mechanical strength. See Example 1.

Yadav et al anticipates the applicants instant invention as set forth since the final product of YSZ has been found having a crystalline nanoscale structure.

Applicants are advised that in order for a product by process claim to read over the prior art, comparison data must be shown to show that the process of making

the product materially changes the product over that of the prior art. Therefore, the rejection as set forth above with respect to Yadav et al anticipating the applicants instant invention stands until applicants have shown that the process materially affects the final product.

***Response to Arguments***

5. Applicant's arguments with respect to the restriction election filed July 03, 2003 have been fully considered but they are not persuasive.

Applicant argues that the product as claimed can not be made by another and materially different process because the claims require that the product be formed by a particular process as defined by one or more of claims 11, 28 and 37. The examiner disagrees with this assessment. In a product by process claim, unless it can be shown that the process materially changes the final product, the product can be made in any manner and still meet the instant claims as set forth. As evidence of this see the 35 USC 102(b) rejection as set forth above showing applicants final product being made in a materially different manner.

The requirement is still deemed proper and is therefore made FINAL.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruce F. Bell whose telephone number is 703-308-2527. The examiner can normally be reached on Monday-Friday 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 703-308-4333. The fax phone

Art Unit: 1746

numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Bruce F. Bell  
Primary Examiner  
Art Unit 1746

BFB  
July 28, 2003